

Name:

# Activity #13

## "Science vs. Wild"

You are on the new twist of a reality show "Science vs. Wild". They have dropped you in the middle of the South Pacific on a deserted island. You have built your canoe out of drift wood, vines and tree sap. However before you set sail you need to power your GPS so you know which way to point your canoe toward civilization. Before you set sail you need to create a battery out of whatever is in your pocket when they dropped you, your clothes and the vast ocean around you.

In 1800 Alessandro Volta created the first battery from alternating layers of metal and paper soaked in salt water. This battery has come to be known as a voltaic pile. Your group will create its own pile using the contents of your hypothetical pocket (I will provide you with these items) and cloth soaked in salt water.

**Your objective:** Create the battery that will produce the highest voltage possible based on the materials provided. You may not look at the table of standard reduction potentials while you work in the lab!!

### **Getting Started:**

Before you begin you need to create a data table to keep track of the information. Make sure I know exactly what you used, how you used it, and the voltage produced.

Next go create piles and record data.

Finally you need to report back to me your findings (this isn't really a competition because you will each be given different things, never the less, don't give away to other groups how you did it).

Your group needs to create a final product with a

- A list of the specific materials you were given
- Diagram of your battery labeling each of the components
- The maximum voltage created
- Any thing else you feel is important (*and relevant*) for me to know about your battery

You will get one stamp for completing your data table and another after you turn in your final product.